

# Zero Beat

## Hampden County Radio Association, Inc.

### Books Wanted

The club is collecting Amateur Radio related books to donate to school radio clubs. If you have callbooks, antenna books, handbooks, repeater directories, or any other books that you are not using anymore, bring them to the meeting and the club will give them to someone who can use them! Currently we are planning to donate books to a radio club/school in the Soviet Union, and to the Minnechaug High School radio club.

If you know of a club that could use some books, the board of directors would be happy to consider them as recipients of books. Contact Janette, **KA1MEW** for more information.

### Callplates Wanted

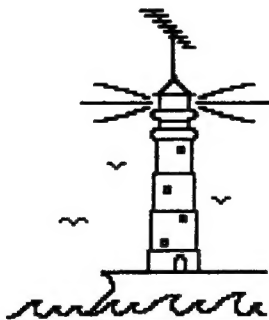
Mike, **W1DGJ**, is looking for used callplates (license plates with call signs on them) in any condition for swapping with collectors. If you have any, give Mike a call at 583-6678 in Ludlow, MA.

### Club Call Available

Don't forget that the club call, **W1NY**, is available for any club member who would like to use it for a contest or special event. You must obtain and fill out an application, and submit it to the board of directors for approval, so make sure you plan ahead. Contact any member of the board for more information, or Jeanette, **KA1MEW**, for an application.

### VCR Giveaway!

The HCRA is sponsoring a raffle to support its PBBS efforts. The prize is a VHS VCR, to be given away at the June meeting. Chances are \$2 each, or 3 for \$5, and will be available at all the meetings through June. Help support the packet PBBS, and maybe win a VCR, too!



### Novice Classes at Science Museum

Beginning Saturday, April 8th, the Springfield Science Museum will be offering novice classes. The classes are from 1-4 PM, and will last for 10 weeks. A test session will be provided at the end of the course so that students may take the novice class exam. Books will be available for \$14, and code oscillator kits will be available for a nominal fee for those who would like to try their hand at kit building. Walk-ins at the first class will be accepted, but you should call to register so that the Science Museum will know they have enough people to run the class. Contact Rosanne McCarthy at 733-1194, or Jack, **WA1YYK**.

### Instructor Wanted

The club would like to offer a Tech/General class, but an instructor is needed. If you have a place of preference to hold the class, you may do so, or the club can provide a place for you. If you are interested in teaching a Tech/General class in the fall, please contact a member of the board of directors.

### Club Officers

President—Phil Smith, **KA1MP**  
Vice President—Dave Bertagnolli, **N1EUZ**  
Treasurer—Greg Stoddard, **N1AEH**  
Secretary/Clerk—Jeanette Platanitis, **KA1MEW**

### Board of Directors

Jim Sebolt, **N1DUY**  
Ken Nickolls, **WB1BZH**  
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Ed Goldberg, **WA1PLS**  
Yorke Phillips, **K1BXE**  
Stan Hilinski, **KA1ZE**  
Bob Lafleur, **NQ1C**

**ADDRESS BY  
FREDERICK O. MAIA,  
W5YI  
MIAMI HAMBOREE  
INDUSTRY MEETING  
8 P.M. - FEBRUARY 3**

Presentation before the ARRL  
No-Code Study Committee  
Airport Hilton, Miami, FL

I would like to talk to you this evening about a subject that is important to us all - that being the future of our hobby and our business - amateur radio. Ham radio is certainly meaningful to us, but a more important question is, why is ham radio important to everyone else? Those in command are concerned about the public. Let's face it, the public is not very concerned about the "hobby" aspects of amateur radio.

It's important because it's a communications service in times of need and disaster....and a training ground for our future engineers and scientists. Ham radio is a high tech learning experience.

There was a time when ham radio was growing. The amateur radio service increased by more than 60% in the ten year period between 1973 and 1983. Amateur radio was alive and thriving ...the annual growth rate stood at nearly 5%. Since that time, however, the number of ham operators has nosedived to an average of less than 1% growth per year. What happened? Two events occurred in the early 1980's that have had a

devastating impact on ham radio growth.

Our pool of radio oriented candidates dried up for one thing - and, yielding to pressure from the league and their membership, the FCC declined to adopt a class of license which would not have a morse code requirement. Docket 83-28 proposed in 1983 to only eliminate the code prerequisite from the technician class for VHF and higher frequency operation, but the proceeding was portrayed as the total abolition of the code.

"No Code" was buried once and for all. It wasn't needed - the league published an editorial stating, "It is gratifying that the FCC has entrusted us with the responsibility for seeing that amateur radio grows and develops on our terms, rather than theirs - and with the commission's continued support, so we shall."

Well, it didn't happen. For all practical purposes ham radio growth stopped dead in its tracks in the early 1980's. While many thought that the adoption of a code free license would signal the beginning of the end of ham radio, I submit that not adopting that measure has had that same effect. I personally believe that if docket 83-28 had been approved, the 5% growth rate would have continued.

Japan allows its amateurs access to the ham bands using low power without a Morse Code requirement. They call it the "voice class." In effect, Japan has their CB band right in the ham bands. That's enough to make any long time ham cringe in horror - but it provides them with a pool of candidates - many who after

becoming exposed to communications and electronics - move on to a high tech career. I don't think it is coincidental that Japan produces more engineers and high technology equipment and innovations per capita than any country in the world.

When CB radio came to a halt in the United States in the early 1980's, our pool of amateur radio candidates simply dried up ...and there is nothing to replace it. There is a very close relationship between the rise of citizens band radio in the 1970's and growth in the Amateur Radio Service.

We can talk all we want to about our controlling growth in the Amateur Radio Service, but we never did. Our growth was tied up in the CB boom. FCC statistics show there was no growth to speak of in the ten years before the CB boom of the 1970's - or after its demise in the early 1980's. Those are the facts. We ought to be down on our knees thanking the citizens band radio service - instead of criticizing it. I would like to show you some interesting ham radio charts. (Charts shown supporting link between CB and amateur radio expansion)

Don't get me wrong, I am not saying we need to bring it back. CB was mishandled from the start. The Citizens Band was carved out of the old eleven meter ham band - and - contrary to intention - it stayed a ham band, ...but without ham radio rules, training, tetsing, leadership, role models and peer pressure. It is not surprising that it eventually degenerated into chaos.

Let's take a look at the present state of ham radio in the United

States. The average age of a ham now is fifty years old - that's up from age forty-six just five years ago. Very, very few youngsters are entering ham radio. The Boys Scouts have their international headquarters in our Dallas area and they tell me today's kids are more interested in robotics, satellites and computers ...than in semaphore flag waving and Morse Code. We can talk all we want to about how easy it is to learn the code, but our youth aren't interested - and aren't doing it.

Amateur packet and satellite communication are two currently burgeoning modes of the future. Both TAPR (Tucson Amateur Packet Radio) and AMSAT (Amateur Satellite Corporation) operators tell us the slow code requirement is a burden to their development. The Boards of both Corporations have endorsed a VHF code-free entry into amateur radio.

According to the U.S. Census, thirty-six percent of the population is age 24 and younger - yet FCC statistics indicate that only six percent of all licensed ham operators fall in that range. Something appears wrong.

Just how important is the code? Apparently not very. Try and find its commercial use by tuning across the bands. The last commercial vestige of required Morse operation, the maritime radio operator at sea is going "QRT". Ocean going vessels will now keep in touch with the outside world more efficiently using automatic satellite communication. I think there is a message for us there.

Apparently, the code isn't as important to existing ham operators either as many would like to have you believe. Just try to find a code key at this...or any other hamfest flea market. Everyone seems to more interested in buying and selling software, computers and other high tech paraphernalia. The times have changed and it is time we upgraded our thinking. While an important tradition, Morse code is antiquated as a means of communication and we can't expect newcomers to share our feels of nostalgia.

I hear the code determines "quality" but there does not appear to be any relationship whatsoever between code proficiency and being a desirable, motivated person. All it does is keep the ham ranks low in number.

There was wide speculation that by giving voice privileges to newcomers that the Amateur Radio Service would grow significantly. "Novice Enhancement" still required that you be code proficient, but now you could operate on small segments of the 10 meter, 220, and 1296 MHz bands.

The fact remains that the code is still the code... and a hardship to newcomers. There were fewer first time amateurs in 1988 - the first full year of the enhanced novice class than there were in 1986 - the final year before its adoption. Clearly "Novice Enhancement" is not working and we obviously need to take a different approach to amateur radio growth.

But now a MORE SERIOUS

PROBLEM HAS SURFACED - The ultimate abuse to the Amateur Radio Service. Since our service is not growing ...and the need for more spectrum by other services is skyrocketing, our valuable frequencies are being taken from us.

The Amateur Radio Service is in a very vulnerable position. We have fewer licensed users per megahertz of allocated spectrum than any other U.S. radio service. It is perceived that ham radio is stagnant ...and our frequencies — particularly at the INCREDIBLY VALUABLE VHF/UHF range - underutilized.

It is little wonder that well organized and well funded commercial interests are successfully convincing the regulators that our frequencies could be better used elsewhere. Ham band frequency attacks have become a way of life ...and you can anticipate they not only will continue, but will increase.

During the past couple of years, I have become aware of some very interesting amateur activities north of the border. For one thing, Canada is no longer a division of the American Radio Relay League. They split off from the league during the mid 1980's. Canada also does not have a beginning ham class and both their regulators and amateurs were advocating a new VHF ham radio entry.

The unique feature is the absence of a Morse code requirement. I thought that unusual since this position was supported by both of Canada's long established amateur organizations. (Show Canadian

"1985 discussion paper", CRRL/CARF joint comments, draft of RIC-24/new rules.)

Their entry level certificate "A" will allow 30 MHz and higher frequency operation after an applicant successfully passes training and testing on regulations, procedures, and basic theory. Morse code will still be required for high frequency operation - although they plan to reduce their 10 and 15 word per minute levels to 5 and 12.

There is absolutely no doubt that Canada will adopt this plan. I have a copy of a September letter from their federal regulatory agency to Canadian Radio Relay League president Tom Atkins/VE3CDM that clearly points out that the restructuring is definitely going to take place. Thus "no code" coming to Canada is not just a recommendation. It is a fact. (Show Sept. 8th letter) This letter came right on the heels of the FCC's August reallocation of 2 MHz from the 220 MHz ham band to narrow band commercial use.

Ray Kowalski was the FCC division chief overseeing the Amateur Radio Service before leaving the commission after 19 years to join a private communications law firm. He also was very much involved in the last no code proceeding. I remembered him telling me how he personally felt the Amateur Radio Service placed too much emphasis on the code. Ray also has great insight into how Wahington operates.

I contacted him during late September and asked him what he thought it would take to get a structure similar to that planned

for Canada adopted here in the United States. He sent me a four page response. I added a cover letter and distributed it to about five-hundred prominent amateurs, organizations and members of industry. I also enclosed a copy of my newsletter detailing the Canadian restructuring. I asked if the time was right to consider such a plan for the United States. I said I would start out an amateur radio expansion fund with \$1,000.00.

The response was immediate and very positive. Many people and members of industry endorsed the concept and sent in contributions to the initiative. Don Stoner/W6TNS said he would form an organization to support the effort and he asked me to be a director and I accepted.

I retained Ray Kowalski to represent a coalition of amateurs and members of industry seeking to implement a U.S. amateur radio structure modeled after Canada.

Although the group that Don Stoner formed never had the intention of filing any petitions, confusion developed and I have since resigned from that organization to end any misunderstandings ...and the perception that the group was competing with the league which is absolutely not the case.

On December 2nd, Ray Kowalski made a formal presentation to FCC private radio bureau chief Ralph Haller/N4RH on behalf of the coalition. This presentation stressed the need for amateur radio growth and suggested a structure similar to that planned for Canada. I believe Ray will be telling you more about

his presentation a little later. A copy of his report detailing his FCC presentation was distributed to interested parties - including Dave Sumner, Executive Vice President of the American Radio Relay League.

Surprisingly, the week after Ray made the presentation to the FCC Private Radio Bureau, members of the ARRL's executive committee meeting in Baltimore, directed President Larry Price to form an "ARRL No-Code Study Committee" with members of the Amateur Radio industry sitting on the panel. It marks the first time in my recollection that members of industry have been asked to actively participate in league decisions and I welcome that precedent. I am prepared to support the ARRL No-Code Study Committee and I feel assured that their recommendations will be in the best interest for the future of amateur radio.

A black cloud looms on the horizon, however. I am concerned that the league directors may not put as much importance in the recommendations of this committee as they do on the views of their membership. The American Radio Relay League is a membership organization...and is committed to support their collective views.

Barry Goldwater/K7UGA - Ham Radio's elder statesman - called us last week and chatted about the future of ham radio. He told me to tell you folks that "he was behind the "no code" effort 100% and that "we live in a day of digital and other special communications. It is time to address the present." That should



be our theme song. IT IS TIME TO ADDRESS THE PRESENT!

George Bush says he wants to be known as the "Education President." Well, here is a golden opportunity for us. I asked Barry to write a letter to the Bush administration telling them that the U.S. Amateur Radio Service is a fertile training ground for our engineers, scientists, and technicians ...and should be recognized as such.

Another General World Administrative Radio conference will be overhauling the entire radio spectrum in a few short years. The United States - and delegations from the entire world - will be analyzing every radio service with an eye to present status ...and future needs. Already it is evident that there is not enough spectrum to go around and it is crucial that we show that ham radio is robust, needed... and growing. Anything less could be costly to us ...and our country.

I really don't think amateur radio can survive as we know it without a "code-free" license. Many amateurs are concerned about uncontrolled expansion, but I believe the testing function can not only control growth ....but make the license meaningful as well.

*The views expressed in this article are not necessarily those of the HCRA or of the editor of ZeroBeat. This article was presented for the purpose of spreading awareness of the no-code license situation.*

## The BC Story

A prominent member of the HCRA who shall remain nameless is a rather old fashioned lady, always quite delicate and elegant, especially in her language. She and her husband were planning a week's vacation in Florida. She wrote to a particular campground to ask for a reservation. She wanted to make sure the campground was fully equipped but didn't quite know how to ask about the toilet facilities. She just couldn't bring herself to write down the word toilet in her letter. Well, after deliberation, she finally came up with the old fashioned term "bathroom commode", but when she wrote that down, she still thought that was being too forward. Therefore, she started all over again and rewrote the entire letter and referred to the "bathroom commode" merely as the "BC". Does the campground have it's own "BC" is what she actually wrote down.

Well, the campground owner wasn't old fashioned at all and when he received the letter he just couldn't figure out what this woman was talking about. That "BC" business stunned him. So after worrying about it for a while, he showed the letter to some of the other campers. They, too, couldn't imagine what the lady meant. Finally, he came to the conclusion that the lady must be talking about the location of the local Baptist Church. So he sat down and wrote the following reply.

Dear Madam,

I regret very much the delay in answering your letter. I now take great pleasure in informing you that the "BC" is located 9 miles north of the campground. It is capable of seating 250 people. I admit that's far to go if you're in the habbit regularly, but no doubt you'll be happy to know that a great number of people take their lunch along and make a day of it. They usually arrive early and stay late. The last time my wife went was six years ago; It was so crowded that we had to stand up the whole time we were there. I would like to say it pains not to go more regularly but, it's surely no lack of desire on my part. As we grow older, however, it seems more of an effort, particularly in the cold weather. If you do decide to come down to our campground, perhaps I could go with you the first time. I could sit with you and introduce you to all the other fellows. We do want you to know that this is a friendly community.

And that's the story about the "BC".

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## For Sale

Swan Sygnet 300B tranceiver. 300W SSB, 200W CW, 65W AM. 80 through 10 meters. Includes model 508 external VFO, built in AC supply, Swan hand mic, and manual. Excellent physical and electrical condition. Call Mike, W1DGJ in Ludlow at 413-583-6678.

## AO-13 Beginner's Guide

AMSAT-NA is proud to announce the availability of a new publication which is titled "AMSAT-NA AO-13 Beginners Guide" and is authored by Keith Berglund, WD5ZDP. This Guide was specifically written with the "first time" AO-13 user in mind and is designed to answer the questions which every beginner on AO-13 is usually pondering. Compiled into one complete source are discussions about all aspects of putting a satellite station together and operating AO-13. Keith has designed the Guide to start from the "antennas down" by including discussions about currently available antennas, rotors, preamps, and coaxial cable. He presents a drawing of a "typical" layout for a useful satellite array for OSCAR operations. Also, Keith discusses some of the currently available equipment on the market today and what one should look for when thinking about purchasing equipment in order to become active on the different AO-13 operating Modes. For completeness, there is a frequency guide which is in a format that will enable novice AO-13 users to "find themselves" on the downlink passband. At the end of the Guide is a complete list of all the AMSAT-NA Regional and Area Coordinators, their home phone numbers, and addresses. Likewise there is a complete list containing the times and frequencies of all "known" AMSAT HF and VHF Nets. This

was included so that the beginner will have additional sources of information if he has more questions, and if an AMSAT Area Coordinator is located near by, he can see what an assembled AO-13 station looks like. One of the primary jobs of the AMSAT Area Coordinators is to act as a "Elmer" to all OSCAR satellite novices located in their Area. With that thought in mind, AMSAT-NA is pleased to offer the "AMSAT-NA AO-13 Beginners Guide" to all new or renewing members. Current AMSAT-NA members who wish to obtain their own copy of this new publication can contact AMSAT-NA Headquarters at (301) 589-6062.

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### Satellite Fox Hunt

Courtney Duncan, N5BF, has recently finished a successful series of tests dealing with "geo-locating" his station's QTH by measuring, recording, and processing doppler shift data collected by monitoring UO-11's telemetry beacon. The results of this series of tests indicate that using standard, "off the shelf" ham radio equipment, e.g., ICOM-271, Courtney was able to compute his QTH latitude to within slightly over one degree and his longitude to slightly over 4 degrees. That works out to a radial error of about 4 km! The software used to process this information and produce the results was written by Joe Bijou, W5CCJ, and runs on IBM-PCs or on IBM clones. Perhaps many of you are wondering at this point why would Courtney Duncan be

interested in pin-pointing his own QTH? [PLEASE NOTE: "No, Courtney has not lost his mind!"] This is the first step in laying the ground-work for a new type of contest being envisioned using the OSCAR satellites which will become known as "SATFOXHUNT." The purpose of this contest will be to pin-point or "geo-locate" a "hidden emitter" located somewhere within the contestant's "range circle" for a particular OSCAR satellite orbit. The software to perform the complex calculations on the doppler shift data being developed by W5CCJ will be available to all amateurs wishing to participate in this future contest. The results of this first series of tests by N5BF indicates that this is a viable kind of contest and is in keeping with the spirit of the ZRO Test. For those amateurs who would like to familiarize themselves with what is needed for this contest and who would like to "sharpen" their operating skills for the "SATFOXHUNT" contest, you can do so by "geo-locating" your own QTH using the software written by W5CCJ. To find out how you can acquire this software, contact AMSAT-NA Headquarters at (301) 589-6062.

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### The NTS System

The National Traffic System consists of four different levels of nets which operate in an orderly time sequence to effect a definite flow pattern for traffic from point of origin to point of destination. A message flows through the National Traffic System in a  
*(continued on back page)*

## Ham Radio History

4 billion BC: Earth is a swirling ball of flaming gasses. Propagation is extremely poor.

1 billion BC: Very dry land appears. It is divided up into squares. County hunters club formed.

500 million BC: Second patch of dry land appears. First DXpedition. Credit disallowed because of questionable licensing arrangement.

400 million BC: Flowering plants and grasses evolve. Telerelex invents first beam antenna, but sales are slow because of lack of suitable structures.

300 million BC: First tree appears. It is immediately cut down, stripped of branches, placed in concrete base, and named a telephone pole. Telerelex sells first beam antenna.

200 million BC: Second beam sold by Telerelex. Installer falls from top of pole. First safety belt sold.

100 million BC: First mountain appears. Repeaters are invented.

50 million BC: It is decided by WARC that seek you is to cumbersome to send on CW. So abbreviation CQ is adopted.

4 million BC: Humans replace swine as dominant species. The name ham operator hangs on however.

3 million BC: Dug out canoe invented. Maritime mobile net formed on 14.313Mhz.

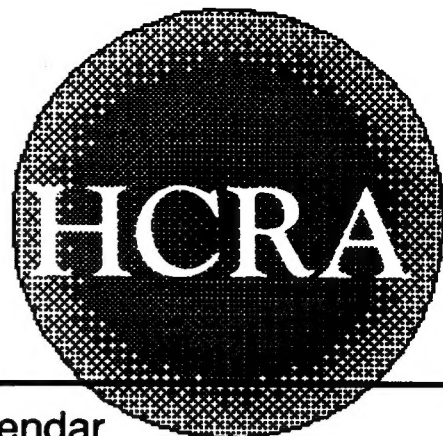
2 million BC - 800 AD: Nothing much happens for a long time.

900 AD: Chinese invent gunpowder. BY1AA is the first big gun DXer.

1790 AD: Ben Franklin invents longwire receiving antenna. Ground switch invented.

1961 AD: Second repeater erected. First repeated group refuses to change frequency. First frequency coordinator appointed.

1989 AD: Amateur radio humor sinks to a new low.



## Club Calendar

April	HCRA/West Exam <b>Club Meeting</b> Board Meeting	April 5 <b>April 7</b> April 11
May	HCRA/West Exam <b>DX</b> Board Meeting	May 3 <b>May 5</b> May 9
June	<b>Banquet</b> HCRA/West Exam < No Board Meeting > Field Day	<b>June 2</b> June 7  June 24-25

HCRA meeting are held at Feeding Hills Congregational Church at 8:00 PM.

Contact Phil Smith, **KA1MP** (413) 562-4731

HCRA/West Exams are held at Agawam High at 7:00 PM *sharp*.

Contact Jeanette Platanitis, **KA1MEW** (413) 786-1463

HCRA/East Exams are held at Minnechaug Regional High School, Wilbraham MA.

Contact Yorke Phillips, **K1BXE** (413) 566-3010

## Local Nets

10 Meter Ragchew Net	Sunday 7:00 PM 28.400
Nutmeg VHF Traffic Net	Daily 9:30 PM 146.28/88
80 Meter Ragchew Net	Tuesday 8:00 PM 3.709 Mhz
WMPN	Daily 6:00 PM 3.937
WMSN	Tuesday & Thursday 7:30 PM 3.713
WMN	Daily 7:00 PM 3.562
WMTN	Monday-Friday 1:00 PM 146.31/91
CPN	Monday-Saturday 6:00 PM 3.965
	Sunday 10:00 AM 3.965
Mt. Tom Information Net	Wednesday 7:30 PM 146.34/94
Mt. Tom Swap Net	Follows Mt. Tom Information Net
Mt. Tom Emergency Net	Sunday 8:45 AM 146.34/94
Agawam Civil Defense Net	Monday 8:00 PM 449.175 & 146.70
RASON	Daily 9:00 PM 146.13/73
WESCON	Daily 8:30 PM 147.78/18
CN	Daily 7:00 & 10:00 PM 3.640
CSN	Monday-Friday 7:30 PM 3.720
CSTN	KY1T PBBS, 145.01 Mhz

manner similar to an air line passenger who starts out in a small residential town with a destination across the continent in another small town. He has to change carriers many times in the process, starting with a local ground conveyance to a feeder air line, to a transcontinental air line, to another feeder air line, then local transportation to deliver him to his destination. In a very similar manner, the transcontinental message starts with the originating station in a local net, is carried to the section net, the region net, the area net, via Transcontinental Corps (TCC) to a distant area net, then back down the line to delivery.

Of course the message, like the passenger, can "get on" or "get off" at any point if that's its origin or destination. Thus, a message from, say, New York to Detroit would never get on TCC, but would "get off" at area level. A message from San Francisco to Los Angeles would not go beyond

region level, and one from San Antonio to Houston would remain inside the section net.

Local nets are those which cover small areas such as a community, city, county or metropolitan area, not a complete ARRL section. They usually operate by VHF (typically 2-meter FM) at times and on days most convenient to their members; some are designated as "emergency" (ARES) nets that do not specialize in traffic handling. The time slot designated for them in Fig. 4 is thus nominal and will vary considerably. Local nets are intended mainly for local delivery of traffic on an emergency basis, inasmuch as such delivery could ordinarily be effected conveniently by non-toll telephone. Some NTS local nets operate on a daily basis, just as do other nets of the system, to put the traffic as close as possible to its actual destination before delivery—a matter of practice in a procedure that might be required in an emergency.

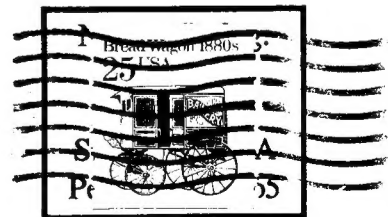
## W1NY Packet Changes

Several changes have taken place in the Hampden County Radio Association's packet system. The W1NY-1 digipeater is now dual-port "TheNet" node. The 145.01 port is W1NY-1, node name SPRFLD. The other port is a 220 port on a local area backbone. This will provide access to other network nodes in New England. The digipeater may continue to be used as it always has been, or you may use the new "TheNet" features. Any comments should be directed to NQ1C or AC1T @ W1NY bbs.

The W1NY bbs has two new antennas! The 145.01 port is running on a Hustler G6-144 vertical antenna, and the 221.11 port is running on a 7 element beam pointed at Granville, MA, providing access to the BERK2

**Hampden County Radio Association, Inc.**  
**P O Box 482**  
**West Springfield MA 01090-0482**  
**Editor: Bob Lafleur, NQ1C**

Forwarding & Address  
Correction Requested



10/89 AC1T

[Redacted address lines]